

NEW SPECIES AND NEW COMBINATIONS OF NEOTROPICAL
EUPATORIEAE (ASTERACEAE)

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ABSTRACT

Gongrostylus pipolyi, *Guevaria micranthera*, *Hebeclinium palaciosii*, and three species of *Ophryosporus*, *Ophryosporus carchiensis*, *O. ferreyrii*, and *O. sagasteguii* are named as new. New combinations are provided for *Eupatorium constanzae*, *E. diversifolium*, and *E. haageanum* in *Koanophyllon*, *Fleischmannia*, and *Ageratina* respectively.

KEY WORDS: Asteraceae, Eupatorieae, Neotropics, *Gongrostylus*, *Guevaria*, *Ophryosporus*, *Koanophyllon*, *Fleischmannia*, *Ageratina*, *Eupatorium*

A number of separate studies, including work on the Eupatorieae for the Flora of Ecuador, have shown the need for the description of the following new species and new combinations. The needs in *Ophryosporus* are particularly notable, with one new species showing an intermediate condition between the pappose and epappose states that are present in that genus.

NEW COMBINATIONS

Ageratina haageana (Regel & Koern.) H. Rob., *comb. nov.* BASIONYM: *Eupatorium haageanum* Regel & Koern., *Ind. Sem. Hort. Petrop.* 40. 1857. Probable type material has been seen from Vienna (W), and it is an *Ageratina* rather similar to *A. pazcuarensis* (H.B.K.) R.M. King & H. Rob. but with leaves more laciniately toothed and more strongly acuminate. The material might be a horticultural variant.

Fleischmannia diversifolia (Schrad.) H. Rob., *comb. nov.* BASIONYM: *Eupatorium diversifolium* Schrad., *Ind. Sem. Hort. Acad. Gott.* 1134. 1829. The name was placed in the synonymy of *Fleischmannia pycnocephala* (Less.) R.M. King & H. Rob. by King & Robinson (1987), but the Schrader name is the older name and would take priority.

Koanophyllon constanzae (Urban) H. Rob., *comb. nov.* BASIONYM: *Eupatorium constanzae* Urban, *Symb. Antill.* 7:422. 1912. Type material has been seen, and it represents a distinct, rather narrow-leaved, species of *Koanophyllon* from the Dominican Republic.

Type material from Vienna (W) has also been seen of *Eupatorium myosotifolium* Jacq. and it proves to be a synonym of *Cyanthillium cinereum* (L.) H. Rob. of the Veronieae.

NEW SPECIES

Guevaria micranthera H. Rob., *spec. nov.* TYPE: PERU. Amazonas: along road ascending mountain SE of Chachapoyas, ca. 9000 ft., Creeping herb on moss-covered rock, 14 Jan 1983, *King & Bishop 9199* (HOLOTYPE: US; Isotype: MO). Paratype: PERU. Amazonas: 28 kms along road from Leimebamba SW towards Celendín, ca. 9700 ft., 19 Jan 1983, *King & Bishop 9251* (MO,US).

In tubis corollarum brevibus et in antherae minutae distincta.

Decumbent perennials to 1.5 dm high, with spreading branches and long rhizomes; stems hirsute with whitish hairs, apparently not fistulose. Leaves opposite; petioles 2-3 mm long; blades ovate, often thin and very translucent, 7-12 mm long, 4-9 mm wide, base very broadly obtuse, subtruncate, margins crenulate-serrate, 5 or 6 teeth on each side, apex short-acute, densely pilose on both surfaces, with sparse glandular dots below. Inflorescences borne erect, raised on long internodes, strongly cymose, usually with 3 or 9 heads; peduncles slender, mostly 5-15 mm long, puberulous with small, ascending pale hairs. Heads 2.5-3.0 mm high, to 4.5 mm wide; involucre bracts ca. 14 in ca. 2 series, rather obovate, ca. 2 mm long, apex thin, rounded, subscarios near margins and tips, ciliate with small hairs, with few hairs outside distally, otherwise glabrous. Florets ca. 40-50 in a head; corollas white, ca. 1 mm long, tube ca. 0.3 mm long, broad at base with spreading, tapering, uniseriate hairs, tube strongly constricted above with few short-stalked glands; throat abruptly and widely ampliate, ca. 0.4 mm long, ca. 0.9 mm wide, with very few nearly sessile glands; lobes ca. 0.3 mm long, densely papillose inside, outside with few glandular dots below, numerous, short, moniliform hairs nearer tip, with numerous small papillae at tip; anther thecae ca. 0.25 mm long. Cypselas ca. 1.2 mm long, oblong, glabrous, contracted below to short pale carpodium.

Guevaria micranthera is evidently most closely related to opposite-leaved members of the genus farther north in Ecuador, and differs from the previously known species from farther south in Perú, *G. vargasii* (I.C. Chung) R.M. King & H. Rob., which has alternate leaves. The new species has the small-leaved spreading habit closest to the most northern of species of the genus, *G. sodiroi* (Hieron.) R.M. King & H. Rob. The new species is primarily distinguished by details of its florets. The corolla tube is distinctly shorter than the throat, the tube bears only short-stalked glands and the anthers are very small.

Gongrostylus pipolyi H. Rob., *spec. nov.* TYPE: COLOMBIA. Antioquia: Mpio. de Frontino, Vereda Venados, Parque Nacional Natural Las Orquídeas, sitio La Gurrucha, 06° 32' N, 76° 19' W, 700-900 m, 5 Feb 1995, *Pipoly et al.* 18406 (HOLOTYPE: JAUM; Isotypes: MO,US). Paratype: COLOMBIA. Chocó, Río San Juan just below Tadó, ca. 100 m, 15 Aug 1976, *Gentry & Fallen* 17725 (COL,MO,US).

A Gongrostylo costaricense (O. Kuntze) R.M. King & H. Rob. in foliis breviter acutis et in setis pappi apice minute latiores distinctus.

Somewhat woody, scandent, slender epiphyte with few branches, branches spreading at 45°-80° angles; stems densely pilose to hirsutulous with blackish hairs. Leaves opposite; petioles 5-11 mm long; blades ovate, 2.5-6.5 cm long, mostly 1.3-3.0 cm wide, shortly acute, surfaces sparsely pilosulous, mostly on veins below, trinervate 3-8 mm above base, with veins parallel to margin in basal half. Inflorescence narrowly pyramidally thyrsoid with lateral branches from axils of leafy bracts, branches densely puberulous with dark hairs; peduncles 0.5-2.3 cm long. Heads 8-10 mm high; involucre bracts ca. 25, subimbricate in ca. 3 series, oblong-ovate to lanceolate, 3.5-7.0 mm long, mostly 1.0-1.8 mm wide, shortly to narrowly acute, glabrous outside, outer bracts thicker and darker, inner bracts paler and striated; receptacle glabrous. Florets ca. 90 in a head; corollas whitish, narrowly funnelliform, 6.0-6.5 mm long, glabrous outside below lobes, with scattered uniseriate hairs inside tube and lower throat, tube ca. 3 mm long, throat ca. 3 mm long, lobes ca. 0.5 mm long, with few glandular dots on outer surface; anther thecae ca. 1 mm long, apical appendage very short and broad; style base enlarged, densely hirsute; tips of style branches greatly enlarged. Cypselas ca. 2.2 mm long, glabrous; carpodium with enlarged basal row of cells; pappus of ca. 30 slender bristles up to 5.5 mm long, longer bristles with slightly but distinctly broadened tips and with rounded apical cells.

Gongrostylus pipolyi is apparently a local endemic in the Pacific coastal area of Colombia. It is a second described species of a previously unispecific genus. It differs from the more widely distributed *G. costaricensis* (O. Kuntze) R.M. King & H. Rob. by the shortly acute rather than narrowly acuminate leaves and the slightly enlarged tips of the longer pappus bristles with rounded apical cells. The hairs on the inside of the corollas are easily overlooked, but apparently occur in both species.

Hebeclinium palaciosii H. Rob., *spec. nov.* TYPE: ECUADOR. Zamora-Chinchipec: Nangaritza Cantón Pachicutza, camino al Hito, 04° 07' S, 78° 37' W, 900 m, 18 Oct 1991, *Palacios, Aymard, & Frieire 8265* (HOLOTYPE: US; Isotypes: MO, QCNE).

Ad *Hebeclinio bullatissimo* (B.L. Rob.) R.M. King & H. Rob. similis sed in caulibus lanulatum in marginibus foliorum serratum in receptaculis sparse hirsutum et in floribus 12-15 in capitulo distinctum.

Weak shrub to 1 m high, sparingly branched; stems terete, brownish lanulate. Leaves opposite; petioles 1.5-4.0 cm long; blades ovate, chartaceous, 4-11 cm long, 2.0-5.5 cm wide, base broadly obtuse to rounded, margins closely serrate, apex acute to scarcely acuminate, upper surface slightly bullate, sparsely pilose with weak hairs, lower surface hirtellous mostly on veins, without evident glandular dots; venation pinnate with ca. 4 ascending secondary veins on each side. Inflorescence a small terminal pyramidal panicle, branches lanulate, cymose, ending in small clusters of heads; peduncles 1-3 mm long, tomentellous. Heads ca. 6 mm high; involucre bracts ca. 35 in ca. 5 series, orbicular to narrowly oblong, 1-4 mm long, 0.7-1.0 mm wide, apices rounded, outer surface glabrous with 3 green lines; receptacle sparsely hirsute. Florets 12-15 in a head; corollas narrowly funnelform, white, ca. 2.8 mm long, glabrous outside below lobes, tube ca. 1 mm long, throat ca. 1.2 mm long, with long hairs inside, lobes ca. 0.3 mm long, with hairs and glandular dots outside; anther thecae ca. 1 mm long; style appendages filiform. Cypselas ca. 1.5 mm long, nearly glabrous, with 1 or a few small setulae above; pappus of ca. 35 white bristles to 2.8 mm long, longer bristles somewhat broadened distally.

The species is known only from the type collection. The specimen was stated to be on a rock in a very shaded place. The species is closely related to *Hebeclinium bullatissimum* (B.L. Rob.) R.M. King & H. Rob. from Ecuador and northern Perú, but the latter has consistently appressed minute puberulence on the stems, crenulate or crenate leaf margins, a glabrous receptacle and 22-30 florets in a head.

Ophryosporus carchiensis H. Rob., *spec. nov.* TYPE: ECUADOR. Carchi: Cantón Montufar, Loma El Corazón (Bretaña) al SE de Mariscal Sucre, Río Minas, 00° 35' N, 77° 42' W, 3150 m, bosque muy húmedo Montano, 22-23 Dec 1992, *Palacios & Tipaz 10524* (HOLOTYPE: US; Isotypes: MO, QCNE).

A *Ophryosporo sodiroi* Hieron. in cypselis setuliferis et in rami stylosum angustioribus distinctus.

Vine with branches spreading at 90° angles; stems brownish, terete, densely puberulous; pith solid. Leaves opposite; petioles 3-8 mm long; blades ovate, 1.8-2.8 cm long, 1.0-1.8 cm wide, base obtuse to short-acute, margins sharply and closely serrate-dentate above widest part, apex acute, upper surface glabrous, lower surface pilose with long hairs mostly crowded along veins, without glandular dots, not viscid, weakly trinervate with ascending secondary veins from well above base. Inflorescence pyramidal to broadly thyrsoid with branches spreading at 90° angles; branches densely pilosulous to tomentellous with brown hairs, peduncles 1-6 mm

long, densely pilosulous. Heads 4.5-5.5 mm high; involucre bracts 5 or 6, drying brown, broadly elliptical to obovate, 3.0-3.5 mm long, 1.0-1.5 mm wide, margins thin, subscarios, apex rounded and minutely toothed, outer surface glabrous. Florets 6 or 7 in a head; corollas creamy white, ca. 3 mm long, with narrow-tipped glandular hairs outside on tube and throat, tube ca. 1 mm long, throat broadly funnelliform, ca. 1.5 mm long, lobes ca. 0.5 mm long, densely low-papillose inside, with few glands outside; anther thecae ca. 0.8 mm long; tips of style branches slightly broadened. Cypselas ca. 1.7 mm long, mostly glabrous, with few setulae near top; pappus of 20-23 bristles ca. 2.5 mm long, slightly broadened at tips, apical cells with rounded tips.

Ophryosporus carchiensis is known only from the type collection. The species is in the scendent group of the genus which includes *O. sodiroi* Hieron. of southern Ecuador and *O. ovatus* B.L. Rob. of northern Perú. The present species differs by the weaker trination and coarser serration of the leaves, the less enlarged tips of the style branches and the apically setuliferous rather than glanduliferous cypselas.

The three specimens of one collection described here as *Ophryosporus carchiensis* were initially determined as *O. serratifolius* (H.B.K.) B.L. Rob. The latter was questionably credited to Colombia, the only member of the genus credited to that country. The type specimen of *O. serratifolius* in Paris was examined by B.L. Robinson, who in 1930 indicated it was unquestionably an *Ophryosporus*. The species has not been recollected from Colombia, and it is doubtfully cited from there. The descriptions of *O. serratifolius* indicate a rather distinctive plant that matches most closely specimens seen in this study from northern Perú (*Ferreyra & Chanco 20436; Llates Quiraz 1199*). The latter collections agree with the original description in having glabrous 6-angled stems, 5 involucre bracts and 5 florets. Most members of the genus have terete stems.

If *Ophryosporus serratifolius* is properly Peruvian, then the new species, *O. carchiensis* is the northernmost known representative of the genus.

Ophryosporus ferreyrii H. Rob., *spec. nov.* TYPE: PERU. Lima: Prov. Huarochirí, Carretera Central, Infiernillo, 3200 m, high montane, semi-arid shrublands, clambering shrub, flowers white, sweet odor, 10 May 1984, *Smith, Ferreyra, & Tovar 7002* (HOLOTYPE: US; Isotypes: MO,USM). Paratypes: PERU. Lima: Huarochirí, abajo del puente de Infiernillo, carretera Lima-Huancayo, 3300-3400 m, pedregoso, sufruticosa, flores blancas, 8 Aug 1949, *Ferreyra 6247* (US,USM); Same locality, arriba de Infiernillo, 3300-3350 m, habitat pedregoso, 0.6-1.0 m, 19 June 1950, *Ferreyra 7706* (US,USM); Central highway 7 km NE of San Mateo on road to La Oroya, shrub to 3 ft., on cliff above road, rays white, 22 June 1966, *Edwin & Schunke 3796* (F,US); Same locality, arriba de San Mateo, falda de cerro, 3200-3400 m, flores blancas, 7 May 1966, *Riccio & La Rosa 554* (US,USM); ca. 4 km E of San Mateo, ca. 117 km E of Lima on road to La Oroya, ± 3600 m, disturbed roadside, shrub to 1.5 m, flowers white, styles white, 7 Jul 1981, *Dillon 2511* (F,MO,US,USM). Prov. Canta, Lachaqui sobre la población, 3800-3900 m, en ladera estepa de gramíneas con arbustos dispersos, flores blancas, 29 June 1992, *Arturo Granda P. 597* (MOL,US).

A. Ophryosporo heptantho (Sch.-Bip. ex Wedd.) R.M. King & H. Rob. in foliis latoribus et argute duplo-serratis distinctus.

Erect to clambering shrubs to 1.5 m high, moderately branched, branches spreading at 60-80° angles; stems pale to dark brown, terete, densely puberulous with brownish hairs; pith solid. Leaves opposite; petioles 0.2-0.8 cm long; blades ovate, mostly 1-5 cm long, 0.7-3.5 cm wide, base broadly obtuse, entire, margins from widest part with large, crowded, jagged, doubly serrate teeth, apex acute, upper surface dark green, pilosulous, lower surface somewhat paler, puberulous mostly on veins, with scattered glandular dots, trinervate with strongly ascending veins near base. Inflorescences corymbiform to subpyramidal, with branches spreading at ca. 90° angles, ending in dense corymbiform clusters of heads; peduncles 1-4 mm long, puberulous. Heads ca. 9 mm high, 2-3 mm wide; involucre bracts ca. 7, green, narrowly oblong to linear, ca. 6 mm long, 1 mm wide, acute at tips, puberulous outside. Florets 6-9 in a head; corollas white, ca. 6 mm long, with scattered glands outside mostly on basal tube and lobes, tube ca. 1 mm long, throat narrowly funnelform, ca. 4 mm long, lobes ca. 1 mm long, 0.5 mm wide, mamillate inside; anther thecae ca. 2 mm long, with small rudimentary appendage; style branches gradually but distinctly broadened at tips. Cypselas ca. 3.5 mm long, with scattered glands on ribs; with slender, pale, crooked stipiform base ca. 0.5 mm long, with firm-walled elongate cells and bearing numerous glands; pappus of ca. 30 irregularly subplumose bristles to 4.5 mm long, not broadened distally, apical cells narrowly acute.

Ophryosporus ferreyrae is evidently a close relative of *O. heptanthus* (Sch.-Bip. ex Wedd.) R.M. King & H. Rob., including *O. origanoides* (Meyen & Walp.) Hieron. of central Peru in Junin southward into Bolivia. The latter differs by the more ascending branches and the narrower leaf blades with more rounded bases and only subserrulate to simply serrate margins. Both species have the extended, slender, stipitate base of the cypselas, but the stipe in *O. heptanthus* has thinner-walled cells that are more sharply differentiated from the carpodium.

Ophryosporus sagasteguii H. Rob., spec. nov. TYPE: PERU. Cajamarca: Contumazá, Contumazá-Cascabamba, 2700 m, ladera, 12 June 1981, Sagastegui, López, & Mostacero 9975 (HOLOTYPE: US; Isotype: HAO).

A *Ophryosporo* cetero in caulis fistulosis et in setis pappi sparsis distinctus.

Subshrub 1-2 m high, moderately branched, with branches diverging at ca. 45° angles; stems brown, terete, sparsely puberulous near nodes, glabrescent, narrowly fistulose. Leaves opposite; petioles 2-8 mm long; blades narrowly ovate, to 3.5 cm long and 1.5 cm wide, base broadly obtuse, margins serrulate to obtusely and somewhat unevenly serrate, with 6-12 teeth on each side, apex acute, upper surface sparsely minutely puberulous, somewhat paler and puberulous mostly on veins below, trinervate from near base. Inflorescence broadly thyrsoid, with central axes of inflorescence and lateral branches usually aborting and forming pseudodichotomies at tips; branches densely puberulous with whitish or sordid hairs; peduncles 0-1 mm

long. Heads ca. 4.5 mm high, ca. 2 mm wide; involucre bracts usually 5 in 1-2 series, narrowly oblong, ca. 3.0-3.5 mm long, ca. 0.8 mm wide, apex obtuse to short-acute, sparsely puberulous outside. Florets usually 5 in a head; corollas whitish, tinged with red distally, ca. 3 mm long, with numerous narrow-tipped stalked glands outside on tube, throat and lobes, tube ca. 1 mm long, throat cylindrical, ca. 1.5 mm long, lobes ca. 0.5 mm long, smooth inside; anther thecae ca. 1.5 mm long; tips of style branches distinctly enlarged. Cypselas (immature) ca. 1 mm long, with numerous setulae near top and bottom, glabrous between; carpopodium shortly stopper-shaped; pappus usually with 4-14 bristles, sometimes totally lacking, with irregular scabrae or barbules.

Ophryosporus sagasteguii is evidently very limited in distribution in southern Cajamarca, an area where many members of the genus occur. The variation in the pappus nicely bridges the now abandoned distinction between *Ophryosporus* and the old concept of *Piqueria* sect. *Artemisioides*. The species may be of hybrid origin, but it possesses at least one other distinctive feature that has been seen in no potential parent, a narrowly fistulose stem. The slightly reddish apices of the corollas also seem somewhat distinctive.

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